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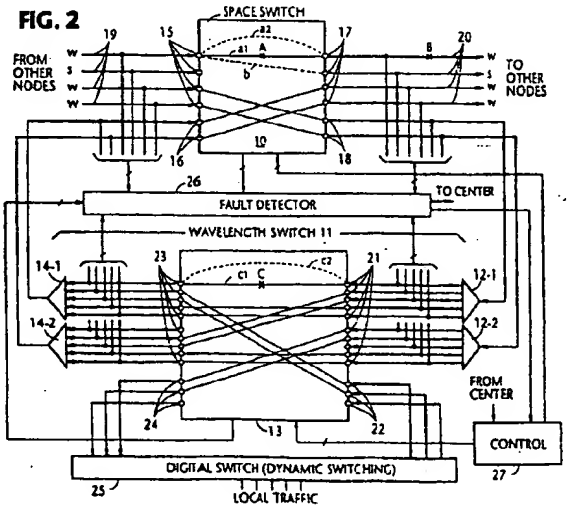
(54) Optical cross-connect system with space and wavelength division switching stages.

(57) In an optical cross-connect system, incoming and outgoing fiber optic trunks carrying WTDM signals are terminated to first inlet ports and first outlet ports of an optical space switch. A wavelength division demultiplexer is connected to a second outlet port of the optical space switch and a wavelength division multiplexer is connected to a second inlet port of the optical space switch. A wavelength-divided space switch has first inlet ports connected to the outputs of the wavelength division demultiplexer and first outlet ports connected to the inputs of the wavelength division multiplexer. A time division demultiplexer is connected to a second outlet port of the wavelength-divided space switch and a time division multiplexer is connected to a second inlet port of the wavelength-divided space switch. The outputs of the time division demultiplexer are connected to first inlet ports of a time switch and the inputs of the time division multiplexer are connected to first outlet ports of the time switch. The time switch has second inlet ports and second outlet ports connected to a switched network.

FIG. 2



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Application Number
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DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.5)
X Y	US-A-5 121 381 (TAKAHASHI ET AL) * abstract * * column 2, line 60 - column 43 * * column 5, line 6 - line 11; figures 2,3 * ---	1,5 2-4,6-14	H04Q11/00
Y	CONFERENCE RECORD, IEEE GLOBAL TELECOMMUNICATIONS CONFERENCE, GLOBECOM '90, 2-5 DEC. 1990, VOL. 2 PAGES 1251-1256, SAN DIEGO US, XP221028 R.W. COUTURE ET AL 'Broadband and Wideband DCS Applications in the Asynchronous and Synchronous Network' * abstract * * page 1252, left column, line 23 - line 32 * * page 1253, left column, line 21 - line 34; figures 1,2 * ---	2-4,6-14	
A	PROCEEDINGS, INTERNATIONAL SWITCHING SYMPOSIUM 1992, 25-30 OCT. 1992, VOL. 2 PAGES 352-356, YOKOHAMA JP, XP337742 P.J. CHIDGEY ET AL 'Wavelength and Space Switched Optical Networks and Nodes' * the whole document * ---	1-14	TECHNICAL FIELDS SEARCHED (Int.Cl.5) H04Q
A	CONFERENCE RECORD, IEEE INTERNATIONAL CONFERENCE ON COMMUNICATIONS, ICC '90, 15-19 APR. 1990, VOL. 4 PAGES 1668-1672, ATLANTA US, XP146064 Y. TAKASAKI 'Multiplexing and Transmission for All-Optical Networks' * page 1670, right column, line 34 - page 1671, left column, line 9; figure 6 * --- -/--	1-14	

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	4 May 1995	O'Reilly, D

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A	ELECTRONICS LETTERS, vol.23, no.18, 27 August 1987, STEVENAGE GB pages 974 - 976 H. KOBRINSKI 'Crossconnection of Wavelength-Division-Multiplexed High-Speed Channels'	1-14	
A	PROCEEDINGS, IEEE CONFERENCE ON COMPUTER COMMUNICATIONS, "INFOCOM '93", 28 MAR.-1 APR. 1993, VOL. 2 PAGES 578-585, SAN FRANCISCO US, XP399037 K-C. LEE 'Routing and Switching in a Wavelength Convertible Optical Network' * page 579, right column, line 1 - line 8 * * page 580, right column, line 9 - line 21; figures 3,4,6 *		TECHNICAL FIELDS SEARCHED (Int.Cl.5)

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